PULMONARY STUDIES SUPPORTED IN 1980 (FOR SAB MEETING, OCTOBER 1980)

EMPHYSEMA/BRONCHITIS RDS/INFLAMMATION DISEASES

I. Proteases: Antiproteases

a. Mechanisms:Biochem (Elastase, α1AP):
1. Travis/Powers (#1135A)
2. Johnson (#1217R1)

b. Experimental Emphysema:Lung Lesions
1. Weinbaum (#901B)
2. Geokas (#1088A)

c. Susceptibility to COPD In Smokers
1. PMN-Elastase (α2MG/α1AP, anionic hydrophobic agents
Galdston (#1242R1)

2. Pancreatic Elastase Circulating Levels (RIA method) /1AP
Geokas (#1088A)

d. Mechanisms:Biochem and Inhibitors of Proteases:
1. Synthetic Inhibitors:
Travis/Powers (#1135A)

2. Endogenous Inhibitors (lung)
Johnson (#1217R1)

3. Macrophage Protease Inhibitors
O'Donnel (#1245)

EMPHYSEMA/BRONCHITIS CONTINUED

e. Mechanisms:Inhibitors of 1AP (Cigarette Smoke):
1. Janoff (#1143A)
2. Travis/Powers (#1135A)

II. Purification of Macrophage Elastase
O'Donnel (#1245)

III. Elastin Biosynthesis
Foster (#1179R2)

IV. Elastin Degradation: (Measurement by RIA)
Janoff (#1259)

V. Delivery of Synthetic Protease Inhibitors by Microspheres
Liener (#1214)*

ENVIRONMENTAL (Cigarette Smoke: Active/Passive)

I. Human Studies
a. Respiratory Disease In Infancy Development of Lung Disease in Adults
C. Hall (#1164R2)

b. Pulmonary Function: Adolescents-Parents Pulmonary and Smoking Histories
B. van den Berg (#1171R2)

c. Predisposition to COPD
M. Galdston (1242R1)

d. Airway Hyperreactivity (Ozone:Cigarette Smoke)
J. Nadel (#1311)

e. Alveolar Clearance Rate of Inert Particles:(Non-Invasive, Magnetic Technique).
A. Freedman (1321)

II. Animal Studies
a. Morphological and Metabolic (phospholipids:biochemistry)
Cigarette Smoke On Fetal and Perinatal Lung Development and Metabolism (Rat)
M. Hamosh (1130B)*

ENVIRONMENTAL CONTINUED

b. Airway Hyperreactivity (Canine): (Ozone:Cigarette Smoke)
J. Nadel (#1311)

c. Ozone on Airway Mast Cells Cigarette Smoke (Canine)
(On Neurohumoral modulation/histamine release: cyclic AMP/GMP).
W. Gold (#1327)

SPECIAL MORPHOLOGICAL SPECIAL FUNCTIONS OF LUNG

I. Endocrine Functions

a. Endocrine-Like Cells In Airways: (Effects of Hypoxia and CO)
Echt (#1244A)

b. APUD CELLS: (Endocrine like cells of lung, and their local neurohormonal control mechanisms)
1. Will (#1036AR2)
2. Kleinerman (#1190)*

c. Metabolic Activities of Pulmonary Endothelium:(Angiotensin I-II: Thromboxanes/Prostaglandins etc.)
Ryan (#814BR2)

d. Mast Cells:
W. Gold (#1327)

IMMUNE MECHANISMS IMMUNOGLOBULIN PRODUCTION: HYPERSENSITIVITY: ALLERGY (CHRONIC BRONCHITIS)

I. Tobacco Antigen
Gleich (#1014BR1)

II. Cigarette Smoking and Ig Production: Human Bronchial lymphocyte.
Lawrence (#1215R1)

TERMINATES/ED

* 6/30/80

MACROPHAGE STUDIES

I. Immunological

a. Lawrence (#1215R1)
b. Springer (#1307)
c. Heracowitz (#1045B)
d. Unanue (#1030AR1)

II. Proteases

a. Travis (#1135A)
b. Weinbaum (#901B)
c. O'Donnel (#1245)

III. Contractile Proteins: Plasma Membrane (Rabbit)
Stossel (#1116A)

IV. Factors in Pulmonary Inflammation
Cochrane (#764HR1)